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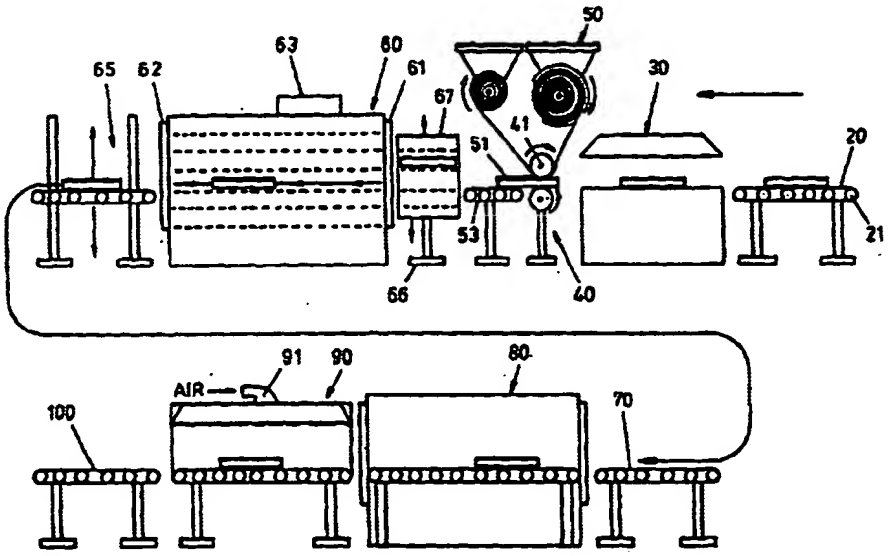

(57) Abstract

An automated method of decorating a face of a flat glass sheet. The method includes the steps of: continuously feeding glass sheets and heat release decals on a decal carrier to a laminating station (40); applying heat to the decal carrier so as to simultaneously heat release the decal from the carrier and deposit the decal on an exposed surface of a respective sheet of glass continuously passing through the laminating station; continuously transferring decal-deposited glass sheets to a decal-securing oven (60); and slowly heating the glass sheets to a predetermined temperature so as to remove all binding agents from the decal and fix the decals to the glass sheets thereby decorating the glass sheets.

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Glass Treatment Process and Apparatus

This invention relates to a process for the treatment of glass, and to apparatus for carrying out the treatment.

The type of treatment of glass with which the invention is concerned is the application of decorative coating material to the surface of a glass substrate, so as to provide any required visible (decorative) appearance to the glass.

The glass substrate therefore provides the necessary strength to the composite article (the substrate plus the decorative coating), and the only requirement of the decorative coating is that it can remain secured to the surface of the glass substrate throughout the required "life" of the article, and can withstand any environmental factors to which it may be exposed in use, and which may tend to separate the coating from the substrate. In other words, a durable decorative coating for a glass substrate is required, and which can be applied to the glass substrate in an easy and reliable manner, and without adversely affecting the structural integrity of the substrate.

The present invention has been developed primarily in connection with the coating of glass substrates for architectural use e.g. as windows in buildings or in glass, in which case the coating will usually be on the inside face of the substrate. Alternatively, for other uses, e.g. in shower screens, the coating will usually be on the outside face of the substrate. Other possible uses will include use in the automotive industry.

It is of course well known to apply paper or vinyl based decorative sheets to glass substrates, using suitable adhesives, and which can be acceptable for indoor use, but such sheets are not durable and can only remain attached to a glass substrate on a temporary basis.